

# MULTISENSOR 4 IN 1

## QUICK INSTALLATION GUIDE v1.0

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### ELECTROMAGNETIC COMPATIBILITY

When operated according to manufacturer instructions, the product complies with all applicable CE harmonised standards from EMC Directive 2004/108/EC and Part 15 of the FCC Rules. The connections conducting HF signals must not be damaged or altered in any way by the user.

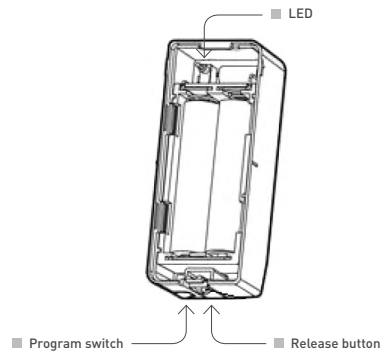
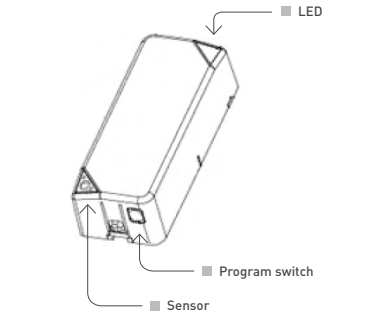
### TAKE CARE OF YOUR SAFETY

Display extreme caution when using ladders or steps, please follow manufacturer's instructions. Be careful when using hand and power tools and follow the manufacturer's guidelines when using them. Take care that the correct tools are used. Wear goggles or protective clothing where required.

## INTRODUCTION

Thanks for choosing the Zipato Multisensor 4 in 1 (door/window contact sensor, humidity sensor, temperature sensor, and light sensor). This sensor is a Z-Wave enabled device (interoperable, two-way RF mesh networking technology) and is fully compatible with any Z-Wave enabled network and its security framework. Every main powered Z-Wave enabled device acts as a signal repeater and multiple devices result in more possible transmission routes which helps eliminate "RF dead-spots". Z-Wave enabled devices displaying the Z-Wave logo can also be used with it regardless of the manufacturer, and this device can also be used in other manufacturer's Z-Wave enabled networks. Zipato Multisensor 4 in 1 sends Z-Wave signal when door or window is opened or closed or there is a humidity, temperature, luminance change. When the Zipato Multisensor 4 in 1 is included (added) into Z-Wave network, above mentioned communication will be encrypted.

## OVERVIEW



### PACKAGE CONTENT

1PC	Multisensor 4 in 1
1PC	Bracket for Magnet
1PC	Magnet
2PCS	Screw to fix magnet
2PCS	Adhesive tape for Magnet / sensor
2PCS	AAA Battery
1PC	Quick Installation guide
1PC	Magnet (flat type) [Multisensor 4 in 1 JP only, or optional]

## FEATURES

- Door/Window, humidity, temperature and illuminance sensor in one device
- Primarily used as dry contact Door/Window sensor, it consists of two parts, magnet and a sensor
- New Z-Wave 500 series chip supports multichannel operation and higher data rates [9.6/40/100kbps]
- Can be used with various Z-Wave networks/controllers, regardless of the manufacturers
- Very low power power consumption
- Low battery auto report
- LED indicator
- Over-the-air firmware update
- Easy installation

## SPECIFICATION

### TECHNICAL SPECS

PROTOCOL	Z-Wave Plus
POWER	AAA battery x 2pcs
OPERATING VOLTAGE:	3V
OPERATING CURRENT	32.2 ~ 34.1 mA
STANDBY CURRENT	2.07 ~ 5.17 uA
OPERATING TEMPERATURE	-10°C ~ 40°C
TEMPERATURE DETECT RANGE	-20°C ~ 50°C
TEMPERATURE DETECT ACCURACY	+/- 2°C (max)
HUMIDITY DETECT RANGE	0 ~ 100%
ILLUMINATION RANGE	0 ~ 100%
RANGE	Up to 31 meter in line of sight (indoor use only)
MAGNETIC GAP	20mm
WEIGHT	-
DIMENSIONS	Sensor: -, Magnet: -
PACKAGE WEIGHT	-
PACKAGE DIMENSIONS	-
REGULATIONS	EMC 2004/108/EC, R&TTE 1995/5/EC, LVD 2006/95/EC, FCC PART 15
WARRANTY	1 year

### MODEL AND FREQUENCIES

EUROPEAN UNION - EU version	vs-zd2201.eu / 868.42 MHz
UNITED STATES - US version	vs-zd2201.us / 908.42MHz
RUSSIA - RU version	vs-zd2201.ru / 869.02MHz
ISRAEL - IS version	vs-zd2201.is / 916.02MHz
AUSTRALIA - AU version	vs-zd2201.au / 921.42MHz
INDIA - IN version	vs-zd2201.in / 865.20MHz

## INSTALLATION

Notice: If you are installing the entire Z-Wave system for the first time, please refer to the installation guide of Z-Wave Controller before installing Multisensor 4 in 1.

- 1 | Push release button to open the rear cover.
- 2 | Using adhesive tape to affix the rear cover on the frame along the opening edge of door / window.
- 3 | Insert AAA battery x 2 into the battery compartment, if user presses the program switch, Multisensor 4 in 1 will send the Node Information Frame (NIF). Multisensor 4 in 1 will go to sleep if user didn't press the program switch within 20 seconds.

### LED Status for Z-Wave Network:

- If user presses the program switch, the red LED will flash 5 times if the Multisensor 4 in 1 has not been included yet.
- If user presses the program switch, the red LED will flash 1 times if the Multisensor 4 in 1 has been included.

- 4 | "Inclusion" (adding) to the Z-Wave network: Put the Z-Wave Controller into "inclusion" mode, and follow its instruction to add the Multisensor 4 in 1 to your controller. To get in the "inclusion" mode, the distance between sensor and controller is suggested to be within one meter. Press the program switch once on Multisensor 4 in 1 for sending the NIF. After sending NIF, Z-Wave will send the auto inclusion; otherwise, if user presses the program switch, the red/orange LED will flash 5 times if the Multisensor 4 in 1 will go to sleep after 20 seconds.
- 5 | "Exclusion" (removing) from the Z-Wave network: Put the Z-Wave Controller into "exclusion" mode, and follow its instruction to delete the Multisensor 4 in 1 from your controller. Press the program switch of Multisensor 4 in 1 for 1 second at least to be excluded.

Note: All user and network settings will be cleared and the device reset to factory defaults when the device is excluded.

- 6 | Push back the rear cover, the LED should go off.
- 7 | Fix the Magnet by using the adhesive tape, locate the Magnet close to the Multisensor 4 in 1 the distance between these two devices should be in 2 cm. Make sure the location of device without shelter above or block the sensor area.

- 8 | Awake Mode: Press the Program SW, the LED will flash one time and Multisensor 4 in 1 will send "Wake Up Notification" after 5 seconds. If Multisensor 4 in 1 received "Wake Up More

Information" command then the Multisensor 4 in 1 will go to sleep or it will wait 10 seconds then go to sleep. It will precede all the commands after sending the "Wake Up Notification".

- 9 | Auto Wake Up: Use "Wake Up" command to set up the awaking time and send the wake up notification to controller. User can use command to change the auto wake up from 10 minutes to 1 week, Interval increment is 3 minutes.

### Battery Capacity Detection:

- Use "Battery Get" command to have the battery capacity back in %
- It will detect the battery capacity automatically.
- Low Battery Auto Report (low battery is set as 2.6+/-0.1 Voltage, detects every 2 hours).

### Association:

- Support one group whit 5 nodes.
- All triggering reports & low voltage report will be sent to the associated nodes.

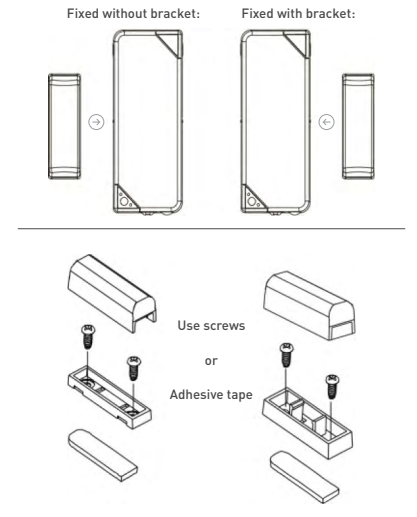
### Power Level Control:

- Use "Power Level Set" to set up the RF strength.
- Use "Power Level Test Node Set" to test specific node's RF sensitivity.

### Support Explorer Frame Function

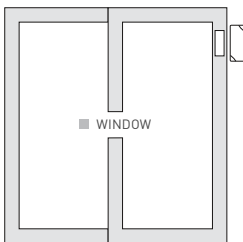
- 14 | All the rest commands depend on Z-Wave standard
- 15 | Factory Default Reset: Open the rear cover to send the Alarm Report and then press the program switch 10 times in 10 seconds, Multisensor 4 in 1 will send the "Device Reset Locally" command and reset to the factory default.

The magnet shall be fixed close to the specific area, and the distance from sensor shall not be more than 2 cm.



### Use adhesive tape for sensor





## OPERATION

1 | Opening/Closing the door/window to separate the magnet from the sensor will send signal to any association nodes according to the Status/Signal table on page 2 and the LED will flash once.

2 | When Multisensor 4 in 1 no trigger; the LED will flash every minute to show the colour of temperature.

3 | If the cover of sensor is removed, the tamper switch will send signal according the status/signal table, and the LED will flash once. Multisensor 4 in 1 will send signal according the status/signal table after closing the rear cover back 2 seconds.

4 | Temperature - If the present temperature is different from the sensor record and exceed the setting program, the sensor will report the present temperature. LED flash every minute to represent the temperature or wake up by press the Program SW.

TEMPERATURE	LED COLOR
Under 15 °C	Green
15 ~ 23 °C	Blue
23 ~ 28 °C	Yellow
28 ~ 36 °C	Orange
Over 36 °C	Red

5 | Humidity Report - If the present humidity is different from the sensor record and exceed the setting program, the sensor will report the present humidity.

MULTILEVEL SENSOR REPORT	
Sensor Type	0x05
Scale	0x00 [%]
Size and Precision	2

6 | Light Report - If the present illumination is different from the sensor record and exceed the setting program, the sensor will report the present illumination.

MULTILEVEL SENSOR REPORT	
Sensor Type	0x03
Scale	0x00 [%]
Size and Precision	2

### ⊕ NOTIFICATION V4 TYPE

	SWITCH TYPE	STATUS
NOTIFICATION TYPE	Reed Switch	0x06
	Tamper Switch	0x07

EVENT	Reed Switch	Close: 0x17, Open: 0x16
	Tamper Switch	Close: 0x00, Open: 0x03

### ⊕ V1 ALARM

	SWITCH TYPE	STATUS
ALARM TYPE	Reed Switch	0x06
	Tamper Switch	0x07
ALARM LEVEL	Close: 0x00; Open: 0xFF	

### ⊕ CONFIGURATION - TEMPERATURE

PARAMETER NUMBER	SIZE	VALUE		PRESET
1	1	°C	0x00	°C[0x00]
		°F	0x01	
2	1	1-50 [ Set up from 0.1°C-5°C]		1 [°C]
3	1	1-50 [ Set up from 1%-50%]		10%

### ⊕ CONFIGURATION - LIGHT

PARAMETER NUMBER	SIZE	VALUE	PRESET
1	1	0,5-50 [ Set up from 0 for Off or 5%-50%]	10%

## Z-WAVE COMMAND CLASSES

COMMAND\_CLASS\_ASSOCIATION\_GRP\_INFO  
 COMMAND\_CLASS\_ASSOCIATION\_V2  
 COMMAND\_CLASS\_BATTERY  
 COMMAND\_CLASS\_CONFIGURATION  
 COMMAND\_CLASS\_DEVICE\_RESET\_LOCALLY  
 COMMAND\_CLASS\_FIRMWARE\_UPDATE\_MD\_V2  
 COMMAND\_CLASS\_MANUFACTURER\_SPECIFIC\_V2  
 COMMAND\_CLASS\_NOTIFICATION\_V4  
 COMMAND\_CLASS\_POWERLEVEL  
 COMMAND\_CLASS\_SECURITY  
 COMMAND\_CLASS\_SENSOR\_MULTILEVEL\_V7  
 COMMAND\_CLASS\_VERSION\_V2  
 COMMAND\_CLASS\_WAKE\_UP\_V2  
 COMMAND\_CLASS\_ZWAVEPLUS\_INFO\_V2

## TROUBLESHOOTING

### Having trouble installing your new product?

Zipato's website contains the latest user documentation and software updates for Zipato products and services:  
[www.zipato.com](http://www.zipato.com)

You can also find answers in the Zipato Community at:  
[community.zipato.com](http://community.zipato.com)

Zipato Support: [support@zipato.com](mailto:support@zipato.com)

## LIMITED PRODUCT WARRANTY

### ⊕ GENERAL TERMS

Nothing in this Limited Product Warranty affects your statutory rights as a consumer.

The Limited Product Warranty set forth below is given by Tri plus grupa d.o.o. (Europe) [herein referred to as "ZIPATO"]. This Limited Product Warranty is only effective upon presentation of the proof of purchase. Upon further request by ZIPATO, this warranty card has to be presented, too.

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This Limited Product Warranty applies to ZIPATO branded hardware products (collectively referred to as "ZIPATO Hardware Products") sold by ZIPATO (Europe), its European subsidiaries, affiliates, authorized resellers, or country distributors (collectively referred to as "ZIPATO Resellers") with this Limited Product Warranty.

The term "ZIPATO Hardware Product" is limited to the hardware components and all its internal components including firmware. The term "ZIPATO Hardware Product" DOES NOT include any software applications or programs.

### ⊕ GEOGRAPHICAL SCOPE OF THE LIMITED PRODUCT WARRANTY

This Limited Product Warranty is applicable to Hardware Products sold by Zipato Resellers in all countries listed at the beginning of this document under the heading "Countries in which this ZIPATO Limited Product Warranty applies". The Limited Product Warranty will be honored in any country where ZIPATO or its authorized service providers offer warranty service subject to the terms and conditions set forth in this Limited Product Warranty. However, warranty service availability and response times may vary from country to country and may also be subject to registration requirements.

### ⊕ LIMITATION OF PRODUCT WARRANTY

ZIPATO warrants that the products described below under normal use are free from material defects in materials and

workmanship during the Limited Product Warranty Period set forth below ("Limited Product Warranty Period"), if the product is used and serviced in accordance with the user manual and other documentation provided to the purchaser at the time of purchase (or as amended from time to time).

ZIPATO does not warrant that the products will operate uninterrupted or error-free or that all deficiencies, errors, defects or non-conformities will be corrected. This warranty shall not apply to problems resulting from: (a) unauthorized alterations or attachments; (b) negligence, abuse or misuse, including failure to operate the product in accordance with specifications or interface requirements; (c) improper handling; (d) failure of goods or services not obtained from ZIPATO or not subject to a then-effective ZIPATO warranty or maintenance agreement; (e) improper use or storage; or (f) fire, water, acts of God or other catastrophic events. This warranty shall also not apply to any particular product if any ZIPATO serial number has been removed or defaced in any way.

ZIPATO IS NOT RESPONSIBLE FOR DAMAGE THAT OCCURS AS A RESULT OF YOUR FAILURE TO FOLLOW THE INSTRUCTIONS FOR THE ZIPATO HARDWARE PRODUCT.

### ⊕ LIMITED PRODUCT WARRANTY PERIOD

The Limited Product Warranty Period starts on the date of purchase from ZIPATO. Your dated sales or delivery receipt, showing the date of purchase of the product, is your proof of the purchase date. You may be required to provide proof of purchase as a condition of receiving warranty service. You are entitled to warranty service according to the terms and conditions of this document if a repair to your ZIPATO branded hardware is required within the Limited Product Warranty Period. [Other than in respect of products for domestic use (in particular those listed in the first and last boxes in the table below), this Limited Product Warranty extends only to the original end user purchaser of this ZIPATO Hardware Product and is not transferable to anyone who obtains ownership of the ZIPATO Hardware Product from the original end-user purchaser.

### ⊕ PRODUCT WARRANTY PERIOD TABLE

PRODUCT TYPE	Door/Window Sensor
PRODUCT WARRANTY PERIOD	One (1) year

### IMPORTANT

The content of "Product Type" listed above is subject to change; please refer to the [www.zipato.com](http://www.zipato.com) for latest update.

### ⊕ PERFORMANCE OF THE LIMITED PRODUCT WARRANTY

If a product defect occurs, ZIPATO's sole obligation shall be to repair or replace any defective Zipato Hardware Product free of charge provided it is returned to an Authorized ZIPATO Service Centre during the Limited Warranty Period. Such repair or replacement will be rendered by ZIPATO at an Authorized ZIPATO Service Centre. All component parts or hardware products that are replaced under this Limited Product Warranty become the property of ZIPATO. The replacement part or product takes on the remaining Limited Warranty Period of the replaced part or product. The replacement product need not be new or of an identical make, model or part; ZIPATO may in its discretion replace the defective product (or any part thereof) with any reconditioned equivalent (or superior) product in all material respects to the defective product.

### WARRANTOR

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 10 000 Zagreb  
 CROATIA

TEL +385 (0)1 4004 404  
 FAX +385 (0)1 4004 405

## DECLARATION OF CONFORMITY



The manufacturer Tri plus grupa d.o.o declares under our sole responsibility that the product:

**Marketing model:** Multisensor 4 in 1  
**Regulatory model:** vs-zd2201  
**Trade/Brand name:** Zipato

is in conformity with the Low Voltage Directive 2006/95/EC, EMC Directive 2004/108/EC and R&TTE Directive 1995/5/EC and carries the CE marking accordingly.

The following harmonised standards were applied:

**R&TTE (1995/5/EC)**  
EN 300 220-1: V2.4.1  
EN 300 220-2: V2.4.1

**EMC (2004/108/EC)**  
EN 301 489-1: V1.9.2  
EN 301 489-3: V1.6.1

**LVD (2006/95/EC)**  
EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011

Changes or modifications not expressly approved by Tri plus grupa d.o.o. for compliance could void the user's authority to operate the equipment.



### THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES.

Operation is subject to the following two conditions:

- 1 | this device may not cause harmful interference, and
- 2 | this device must accept any interference received, including interference that may cause undesired operation.

**NOTE: Changes or modifications not expressly approved by Zipato for compliance could void the user's authority to operate the equipment.** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

### DISPOSING AND RECYCLING YOUR PRODUCT

When it reaches end of life, dispose of the product according to your local environmental laws, guidelines and regulations.

### BATTERY DISPOSAL

Dispose of batteries according to your local environmental laws, guidelines and regulations.



This symbol on the product or packaging means that according to local laws and regulations needs to be disposed of separately from household waste. Once this product has reached the end of its life, please take it to a collection point (recycle facilities) designated by your local authorities, some will accept your product for free or simply drop it off at your Zipato re-seller store. By recycling the product and its packaging in this manner you help to conserve the environment and protect human health. At Zipato, we understand and are committed to reducing any impact our operations and products may have on the environment. To minimize this impact Zipato designs and builds its products to be as environmentally friendly as possible, by using recyclable, low toxic materials in both products and packaging.

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